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REDISCOVERY OF AND NOTES ON *XANTHOTHRIX RANUNCULI* FORM *ALBIPUNCTA* BARNES & BENJAMIN, 1925 (NOCTUIDAE: STIRIINAE)

Additional key words: discal spot, *Coreopsis*.

Barnes and Benjamin (1925) described *albipuncta* as a form of *Xanthothrix ranunculi* based on two individuals, a male holotype and a female allotype, collected 10 April 1902 at Kaweah, Tulare Co., California. The moths were described as having “head, thorax and forewing black dusted with olivaceous, the latter with a round white spot near end of cell. Secondaries blackish.”

Xanthothrix ranunculi was described by Henry Edwards (1878) from Havilah, Kern Co., California, and most specimens seen are from Lovejoy Buttes, Los Angeles Co., California. These moths were described as, “Primaries wholly rich buff, sometimes pale orange when very fresh, but upon some scales being removed, showing a blackish tint. Secondaries, dusky along the costa, apical margin and at base, buff in the center, and towards the anal angle. . .” Comstock and Henne

(1940) described their early stages, and reported the hostplant is *Coreopsis douglasii* (Asteraceae). Poole (1994) makes no mention of form *albipuncta*.

On 21 March 1990, I collected three individuals of a small moth flying near *Coreopsis stillmanii* (Asteraceae) on a steep, south-facing slope above the middle fork of the American River, 13 mi. NE of Auburn, Placer Co., California. One, a worn specimen, fit the description of *Xanthothrix ranunculi* form *albipuncta*; the two fresh specimens had gold forewings with a light yellow spot near the end of the cell. The habitat consisted of annual grasses and flowering plants surrounded by foothill woodland. At the same locality, in March 1998 the moths were numerous and were often seen sitting on the *Coreopsis* flower heads. More individuals were collected and the association with *Coreopsis* observed. Alvin Ludtke collected females and *Coreopsis still-*



FIG. 1. *Xanthothrix ranunculi* form *albipuncta*. Columns 1 and 2, Mariposa Co., showing variation. Column 1 top, Scotch Gulch, 6 mi. SE of Coulterville, Mariposa Co., CA, 29-III-1999, others, same locality but 22-III-2000. Column 3 Placer Co. 2 mi. E of Ruck-A-Chucky Falls, middle fork of the American River, 13 mi. NE of Auburn, Placer Co., CA. Top 27-III-1999, bottom 19-III-1998.



FIG. 2. Mature larva of *Xanthothrix ranunculi* form *albipuncta* on *Coreopsis stillmanii*. Reared *ex ovum* from a female collected 2 mi. E of Ruck-A-Chucky Falls, middle fork of the American River, 13 mi. NE of Auburn, Placer Co., CA. Scale at top of photograph in millimeters.

manni from the site to attempt rearing. The females oviposited on these plants, and larvae (which fed on the developing achenes) were reared through the third instar. The larvae were then moved to a perennial garden *Coreopsis*, on which they fed for a while, then died, for unknown reasons, without pupating.

In March 1999 and March 2000, D. Brown and I collected these moths southeast of Coulterville, Mariposa Co., California resting on the flower heads of *Coreopsis stillmanii*. Goldfields, *Lasthenia* (Asteraceae) were growing with the *Coreopsis* there but the moths did not rest on their flower heads. Unlike in Placer Co., the habitat there was on serpentine soils, and Buck Brush, *Ceanothus cuneatus*, dominated the flora. These moths very closely resembled the Placer Co. moths, although a greater number of them had a dull, gray-green color to the forewing, with the forewing spot closer to white. This coloring was most marked in worn individuals, but was also characteristic of some fresh individuals, on which the long scales on the forewing were a very light yellow rather than gold. No individuals were found in an April 1999 visit to the type locality. On March 18, 2001 the moths were found, again associated with *Coreopsis stillmanii*, on an area of serpentine soils in Tuolumne Co.

The Placer and Mariposa Co. moths appear more golden than the worn type of *albipuncta*, suggesting that the gold scaling on the forewings is gradually lost causing the wings to appear olivaceous in older specimens. All Mojave Desert specimens of *ranunculi* lack the yellowish spot near the apex of the discal cell that is present in *albipuncta*.

It is likely that *albipuncta* and *ranunculi* are different species. *Xanthothrix ranunculi* is golden yellow, is apparently restricted to the Mojave Desert, uses *Coreopsis douglasii* as a food plant, and lacks a forewing spot near the apex of the discal cell. *Xanthothrix ranunculi* form *albipuncta* has golden forewings and blackish hindwings, is apparently restricted to the lower, grassy foothills of the Sierra Nevada, uses *Coreopsis stillmanii* as a food plant, and has a light yellow forewing spot near the apex of the discal cell. *Philotiella speciosa* and its subspecies *bohartorum* (Lycaenidae), which also may be a separate species, display a similar disjunct distribution.

Plants were identified using Hickman (1993).

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ADDENDUM TO THE SPHINGIDAE OF LOUISIANA

Additional key words: bait traps, hawkmoths, light traps, Louisiana, sphinx moths.

The Sphingidae of Louisiana were reported by Brou and Brou (1997) in a 26-year study treating abundance, distribution, and flight periods. We listed 55 species of Sphingidae recorded for Louisiana and 46 species documented by our study. The quantity of adult sphingidae captured from 1970 to 1995 for the state of Louisiana totaled 71,836 specimens. This brief article is intended to add to and finalize our previous investigations. No newly recorded species were encountered during these four years, nor were species newly encountered in bait traps versus light traps than were previously reported. This addendum, representing four years (1996–1999) yielded 12,053 specimens

representing 36 species (Table 1). Fermenting bait traps were operated only in 1996–1997, while ultraviolet light traps were operated all four years. These additional records represent 30 consecutive years of Sphingidae records for the state of Louisiana, totaling 83,889 captured adults.

Total trap hours expended during the 30 year investigation were in excess of 1.4 million hours, involving 491,000 ultraviolet light trap hours and 913,000 fermenting bait trap hours. Specimens retained during this addendum period are deposited in Florida State Collection of Arthropods (Gainesville) and Louisiana State University (Baton Rouge).